

**ABSTRACT**

An apparatus includes semiconductor processing equipment. A particle detecting integrated circuit is positioned in a vacuum environment, the particle detecting  
5 integrated circuit containing a device having a pair of  
conductive lines exposed to the vacuum environment. The  
pair of conductive lines is spaced at a critical pitch  
corresponding to diameters of particles of interest. A  
computer system is linked to the particle detecting  
10 integrated circuit to detect a change in an electrical  
property of the conductive lines when a particle becomes  
lodged between or on the lines.

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